

## Message Text

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ACTION SCI-06

INFO OCT-01 EUR-25 ADP-00 INT-08 NSF-04 DODE-00 ACDA-19

CIAE-00 INR-10 IO-13 L-03 NSAE-00 NSC-10 RSC-01

SCEM-02 AEC-11 RSR-01 /114 W

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R 191815Z JUL 73

FM AMEMBASSY BONN

TO SECSTATE WASHDC 6384

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DEPT FOR BLOOM SCI; PASS TO INTERIOR FOR SLATER, AEC FOR  
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E.O. 11652: N/A

TAGS: TGEN, ENRG, GW

SUBJECT: US-FRG COOPERATION IN MAGNETOHYDRODYNAMICS  
AND ENERGY R&D

REF: (A) BONN 3238; (B) BONN 586;  
(C) BONN 16399 (DECEMBER 1972)

SUMMARY: FRG DECISION TO TERMINATE DIRECT  
GOVERNMENTAL SUPPORT FOR RESEARCH AND DEVELOPMENT (R&D)  
ON MAGNETOHYDRODYNAMICS (MHD) COMPLICATES CONTINUATION  
OF COOPERATIVE PROGRAM UNDER US-FRG MEMORANDUM OF  
UNDERSTANDING (MOU). EMBASSY RECOMMENDS USG AVOID ANY  
IMPLICATION THAT FRG HAS VIOLATED MOU BUT RATHER BEGIN  
CONSIDERATION OF AMENDMENTS TO THIS COOPERATIVE PROGRAM  
WHICH WOULD FACILITATE DEVELOPMENT OF US-FRG  
COOPERATION IN ENERGY R&D. END SUMMARY.

1. ON APRIL 21, 1971, FRG SCIENCE MINISTER LEUSSINK  
AND US DEPUTY SECRETARY OF INTERIOR PECORA SIGNED MOU  
FOR COOPERATION IN R&D ON MHD, AN ENERGY SOURCE FOR THE  
FUTURE, AS PART OF US-GERMAN PROGRAM FOR CONSERVATION OF  
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NATURAL RESOURCES (UGNR). REFTELS SUMMARIZE

SUBSEQUENT FRG DECISION TO TERMINATE DIRECT GOVERNMENTAL SUPPORT FOR MHD/R&D. FRG RESEARCH IN LIQUID-METAL MHD WAS TO BE CONTINUED AT TECHNICAL UNIVERSITY OF BERLIN (TUB) UNDER NOMINALLY "NON-GOVERNMENTAL" FUNDING BY GERMAN RESEARCH SOCIETY (DEUTSCHE FORSCHUNGSGEMEINSCHAFT DFG, ROUGHLY COUNTERPART OF NSF IN US).

2. DURING PAST TWO YEARS, US SCIENTISTS HAVE DEVELOPED OUTLINE OF COOPERATIVE PROGRAM WITH TUB WHICH WOULD REQUIRE EXPENDITURES OF ROUGHLY DM 1.2 MILLION ABOVE PRESENT DFG FUNDING LEVEL. INFORMAL DISCUSSIONS BETWEEN AMERICAN AND GERMAN SCIENTISTS AND BETWEEN AMERICAN SCIENTISTS AND OFFICIALS OF FRG TECHNOLOGY MINISTRY HAVE INDICATED THAT TECHNOLOGY MINISTRY DOES NOT RPT NOT PLAN TO MAKE THESE ADDITIONAL FUNDS AVAILABLE. SCIENCE ATTACHE HAS CONFIRMED THAT TECHNOLOGY MINISTRY HAS NOT RPT NOT BUDGETED FUNDS FOR THIS PURPOSE.

3. DR. MENDEN, CHIEF OF OFFICE FOR NEW TECHNOLOGIES, FRG TECHNOLOGY MINISTRY, HAS MADE THIS SITUATION CLEAR IN DISCUSSIONS WITH REPRESENTATIVES OF OFFICE OF NAVAL RESEARCH, US AIR FORCE, ARGONNE NATIONAL LABORATORY AND ATOMIC ENERGY COMMISSION. HE HAS PROPOSED THAT US (AND FRG) INVESTIGATE POSSIBILITY OF EXPANDING OR REDEFINING THIS COOPERATIVE PROGRAM TO ASSOCIATE THIS LIQUID-METAL MHD RESEARCH WITH OTHER RELEVANT PROGRAMS IN THE US WHICH MAY BE OF GREATER IMMEDIATE INTEREST TO THE FRG. HE SUGGESTED, FOR EXAMPLE, THAT THE OBJECTIVES OF THE LIQUID-METAL MHD PROJECT BE ASSOCIATED WITH RELEVANT ASPECTS OF THE LIQUID-METAL, FAST-BREEDER REACTOR R&D PROGRAM OF THE USAEC. IF THIS COULD BE DONE IT MIGHT, IN MENDEN'S VIEW, BE POSSIBLE TO FINANCE THE NECESSARY ALTERATIONS IN THE TUB FACILITIES FROM FRG FUNDS ALLOCATED FOR THEIR RELATIVELY HIGH-PRIORITY, FAST-BREEDER REACTOR PROGRAM. OTHER TECHNOLOGY MINISTRY OFFICIALS ARE NOT RPT NOT SO CONFIDENT, HOWEVER, BECAUSE THE FRG ATOMIC ENERGY PROGRAM FACES A BUDGET CEILING (SEE BONN A-279).

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4. IN PRINCIPLE, THE DFG COULD SUPPLY THE DM ONE MILLION NEEDED TO PERMIT US-FRG COOPERATION AT THE TUB FACILITIES. WE UNDERSTAND THAT THIS SEEMS UNLIKELY AT THE PRESENT TIME. THE SUM INVOLVED IS QUITE SIGNIFICANT BY DFG STANDARDS WHICH ANNUALLY SPENDS ONLY ABOUT DM 30 MILLION ON ALL OF THEIR "SPECIAL RESEARCH AREA" ENGINEERING PROJECTS. CONSEQUENTLY, THE US-FRG COOPERATIVE PROGRAM IN LIQUID-METAL MHD/R&D SEEMS TO

DEPEND ON THE DEVELOPMENT OF A NEW RATIONALE BY BOTH SIDES, ON NEW SOURCES OF FUNDING ON THE GERMAN SIDE, AND POSSIBLY ON ACCESS TO SOME US LIQUID-METAL FAST-BREEDER REACTOR TECHNOLOGY FOR THE FRG.

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5. US AGENCIES INVOLVED HAVE ALREADY COMMITTED SOME FUNDS AND ARE ACTIVELY PLANNING FOR THIS COOPERATIVE PROGRAM. UNDERSTANDABLY, THESE AGENCIES ARE NOW ATTEMPTING TO INFLUENCE FRG TO SUPPORT GERMAN SHARE OF PROJECT BY, FOR EXAMPLE, APPROACHES THROUGH THE FRG SCIENCE COUNSELOR IN WASHINGTON AND LETTERS TO GERMAN OFFICIALS WHICH HINT THAT THE FRG MAY HAVE FAILED TO HONOR THE TERMS OF THE US-FRG MEMORANDUM OF UNDERSTANDING. EMBASSY BELIEVES THAT THESE EFFORTS ARE LIKELY TO BE COUNTER-PRODUCTIVE. THE MOU REPRESENTS ONLY A STATEMENT OF MUTUAL INTERESTS WHICH IS NOW, AT LEAST IN PART, NO LONGER A VALID REFLECTION OF FRG PRIORITIES IN SCIENCE AND TECHNOLOGY. FURTHERMORE, THE MOU IS NOT A FIRM COMMITMENT TO FUND JOINT PROGRAMS. THESE ARE EXPLICITLY SUBJECT TO THE AVAILABILITY OF APPROPRIATED FUNDS. ACCORDINGLY, ANY ATTEMPT TO IMPLY A VIOLATION OF THIS MOU COULD CREATE ILL-WILL THAT WOULD ADVERSELY AFFECT OTHER HIGH-PRIORITY US-FRG PROGRAMS.

6. EMBASSY UNDERSTANDS THAT DR. COOPER, MHD PANEL CHAIRMAN, PLANS TO VISIT HIS FRG COUNTERPART, DR. BOHN, IN LATE AUGUST TO DISCUSS THIS PROBLEM. WE DO NOT RPT NOT OPPOSE DR. COOPER'S VISIT IF LIMITED TO THE DISCUSSION OF TECHNICAL STATUS OF MHD PROGRAMS BUT WE LIMITED OFFICIAL USE

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DO BELIEVE THAT DR. BOHN IS NOT RPT NOT THE PROPER POINT OF CONTACT FOR EFFORTS TO RESOLVE QUESTION OF COOPERATIVE RESEARCH IN LIQUID-METAL MHD UNDER PRESENT MOU OR WITHIN EXPANDED CONCEPT SUGGESTED BY DR. MENDEN.

7. DR. MENDEN PLANS TO VISIT THE US IN EARLY SEPTEMBER. EMBASSY PROPOSES THAT USG REVIEW PRIORITY WE ASSIGN TO THIS COOPERATION IN LIQUID-METAL MHD AND CONSIDER POSSIBILITY OF EXPANDING THE TERMS OF REFERENCE FOR THIS PROJECT TO INCLUDE OTHER ASPECTS OF LIQUID-METAL RESEARCH, I.E. FAST BREEDERS. WE RECOMMEND THAT APPROPRIATE OFFICIALS BE PREPARED TO REVIEW ALL ASPECTS OF THIS QUESTION WITH MENDEN DURING HIS VISIT.

8. WE HAVE SUGGESTED IN OTHER COMMUNICATIONS THAT MENDEN'S VISIT, WHICH WILL COVER MANY ASPECTS OF ENERGY R&D, BE USED BY THE USG AS A FOCAL POINT FOR AN EXCHANGE OF VIEWS ABOUT US-FRG COOPERATION IN ENERGY R&D IN ACCORDANCE WITH PRESIDENT'S ENERGY MESSAGE. EMBASSY ALSO SUGGESTS THAT PRESENT MHD COOPERATIVE PROGRAM, WHICH IS CURRENTLY LIMITED BY FRG FUNDING DECISIONS, COULD BECOME ONE ELEMENT IN AN EXPANDED COOPERATIVE BILATERAL PROGRAM IN ENERGY R&D. THIS PROGRAM MIGHT THEN PROVIDE THE EXPANDED TERMS OF REFERENCE NEEDED BY THE FRG FOR AN AUTHORIZATION OF FUNDS TO THE TUB FOR THE LIQUID-METAL MHD PROJECT.  
HILLENBRAND

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